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EXAMINER

MEINECKE DIAZ, SUSANNA M

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/398,378

Applicant(s)

LAHEY ET AL.

Examiner

Susanna M. Diaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This final Office action is responsive to Applicant's amendment filed May 2, 2005.
Claims 1, 7, 13, 19, 25, and 31 have been amended.
Claims 1-36 are presented for examination.

Terminal Disclaimer

2. The terminal disclaimer filed on May 2, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,466,935 has been reviewed and is accepted, thereby obviating the Double Patenting rejection. The terminal disclaimer has been recorded.

Response to Arguments

3. Applicant's arguments filed May 2, 2005 have been fully considered but they are not persuasive.

Applicant argues:

...The Stuart patent does not describe that a user defined function identifies a single work process using a mapping. The Stuart patent describes a relational database table, but the relational database table is not a mapping that maps an input status of a job to a work process. For example, the table of FIG. 6 of the Stuart patent does not describe work processes and so cannot be used as a mapping. (Page 18 of Applicant's response)

"Mapping" merely refers to the fact that there are identified relationships. A relational database, by nature, defines relationships among the various pieces of stored

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data. Stuart specifically states, "Upon completion of the processing step, the status of the work item in the one or more relational database tables is updated to a completed status of the processing step. The completed status of the processing step represents a ready status for a new processing step." (Abstract) The "ready status for a new processing step" is equivalent to an "input status of a job to a work process."

Applicant argues:

...The Stuart patent describes that the WFMS retrieves the highest priority work item by querying or polling the relational database tables (Col. 4, lines 41-43). On the other hand, the claimed invention describes that a user defined function notifies the work process that there was a change in status. (Pages 18-19 of Applicant's response)

...Again, the Stuart patent describes that the WFMS retrieves the highest priority work item by querying or polling the relational database tables (Col. 4, lines 41-43), but there is no description that the work process queries the job status table in response to the notification from a user defined function. (Page 19 of Applicant's response)

The WFMS must know when to query the relational database tables for another job. For example, the WFMS must be able to identify that a status has changed and, therefore, that a job is ready to undergo the next assigned work process. This change in status in combination with the WFMS's ability to detect this change in status, thereby triggering performance of the work process related to the new status, is indicative of the fact that the WFMS must somehow be notified of the status change and next assigned work process. It is this status change and/or notification that a resource is ready to process another work process that triggers the WFMS to retrieve details regarding the next work process(es) to be initiated. It should also be noted that no temporal

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constraints are imposed by the claim language. For example, completion of one work process does not necessarily trigger immediate processing of the subsequently scheduled work process; it is merely placed in line to be processed once the necessary resources become available, e.g., after completing work processes associated with other jobs.

In conclusion, Applicant's arguments are non-persuasive; therefore, the art rejection is maintained.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Stuart (U.S. Patent No. 6,466,935).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Stuart discloses a method for processing a job, comprising:

[Claim 1] generating, with a computing system, a signal when status for the job is changed from a first status to a second status in a job status table, wherein each status for the job is associated with a single work process for processing the job among multiple work processes, wherein each status refers to a next process to be performed by the single work process associated with the status, wherein each work process is an application program, and wherein the job status table identifies jobs on which work is performed, and wherein the signal is generated by an event trigger (Fig. 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24 – A job, or work item, goes through various statuses, or work processes. A change in status indicates the next work process to be performed as part of the job. For example, looking to Fig. 6, a job identifier corresponds to each job. Each job passes through various statuses, such as "Ready for Printing" and "Ready for Binding");

identifying using a mapping, with a user defined function, a single work process for processing the job based on the second status, wherein the second status is associated with the identified work process, wherein the user defined function is invoked by the event trigger with the second job status and wherein the mapping maps an input

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status of a job to a work process (Figs. 1, 6; col. 4, lines 12-17, 38-55 – The system is self-scheduling, such that the output of one step is the input to another);

notifying, with the user defined function, the work process associated with the second status that one job had its status changed to the second status in response to the signal (col. 6, lines 21-28; col. 11, lines 3-23 – Each work process is notified of which jobs are in the status corresponding to the respective work process);

processing, with the work process, the job that had its status changed from the first status to the second status, wherein the work process queries the job status table to identify the job having the second status which is associated with that work process and to obtain job information in response to the notification (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23 – Each work process is notified of which jobs are in the status corresponding to the respective work process. The status information is retrieved by querying a job status table); and

modifying, with the work process, the status of the job in the job status table after completing the processing of the job, wherein each work process is associated with one input status and one or more output statuses, wherein the modified status of the job is associated with another work process, and wherein the mapping may be modified to perform at least one of adding, removing, and modifying statuses associated with work processes to modify an order of the job processing (Fig. 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24 – Priority and class attributes may be set to define the

order in which the work processes associated with various jobs are to be performed;
col. 4, lines 60-63 discuss how a user can alter the order of jobs);

[Claim 2] wherein the signal is transmitted to a routing process and indicates the second status (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23), further comprising:

processing with the routing process the mapping associating each status with one work process in response to receiving the signal (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23); and

determining from the mapping one work process associated with the second status, wherein the determined work process is notified of the job (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23);

[Claim 3] wherein job status is maintained in a database table including information on the job, further comprising maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the status of the job with the work process after completing processing comprises updating the status of the job with the work process to an output status associated with another work process, and wherein updating the status with the output status generates the signal indicating a change in status (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23);

[Claim 4] wherein the signal is generated by an event trigger in the database at the computing system that responds to an update to the status of the job in the database table (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23);

[Claim 5] wherein there are multiple work processes, wherein each work process is enabled to update the job status with one associated output status after completing the

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processing of the job, wherein the output status for one work process is the input status associated with one other work process, and wherein the definition of input and output statuses for work processes, defines the workflow of the job (Figs. 2, 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24);

[Claim 6] further comprising the work process performing:

determining, with the computer system, whether the work process completed processing the job successfully (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33); and

updating, with the computer system, the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33);

[Claim 8] wherein the work process further performs:

processing the jobs having the status associated with the work process (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23);

terminating processing of the database table if there are no further jobs in the database table having the status associated with the work process (col. 10, lines 49-51); and

querying the database table for additional jobs after receiving the notification (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23);

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[Claim 9] wherein the work process spawns a work thread to process one job in the database table having the status associated with the work process, wherein the work process is capable of spawning multiple work threads to process different jobs having the status associated with the work process (Fig. 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24 – Priority and class attributes may be set to define the order in which the work processes associated with various jobs are to be performed);

[Claim 10] wherein the job comprises a data file, wherein at least one process processes the data file to alter its format and at least one other work process processes the data file in the altered format to transmit the data file to an output device (col. 3, lines 62-66; col. 6, lines 28-56);

[Claim 11] wherein at least two work processes process the job at different devices in communication over a network, further comprising accessing the job, with one of the work processes, from another device over the network to process the job at the device on which the work process executes (Fig. 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24);

[Claim 12] adding, with the computer system, a status update, to a list providing status updates for each job (Figs. 2, 6; col. 6, lines 21-67; col. 7, lines 27-42; col. 11, lines 3-23); and

using the list to determine how the job has been processed by the work processes (Figs. 2, 6; col. 6, lines 21-67; col. 7, lines 27-42; col. 11, lines 3-23).

Stuart discloses a method for processing a job, comprising:

[Claim 7] generating, with a computing system, a signal when status for the job is changed from a first status to a second status in a job status table, wherein each status for the job is associated with a single work process for processing the job among multiple work processes, wherein each status refers to a next process to be performed by the single work process associated with the status, wherein each work process is an application program, wherein the job status table identifies jobs on which work is performed, and wherein the signal is generated by an event trigger (Fig. 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24 – A job, or work item, goes through various statuses, or work processes. A change in status indicates the next work process to be performed as part of the job. For example, looking to Fig. 6, a job identifier corresponds to each job. Each job passes through various statuses, such as “Ready for Printing” and “Ready for Binding”);

identifying using a mapping, with a user defined function, a single work process for processing the job based on the second status, wherein the second status is associated with the identified work process, wherein the user defined function is invoked by the event trigger with the second job status and wherein the mapping maps an input status of a job to a work process (Figs. 1, 6; col. 4, lines 12-17, 38-55 – The system is self-scheduling, such that the output of one step is the input to another);

notifying, with the user defined function, the work process associated with the second status that one job had its status changed to the second status in response to

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the signal in response to the notification (col. 6, lines 21-28; col. 11, lines 3-23 – Each work process is notified of which jobs are in the status corresponding to the respective work process);

processing, with the work process, the job that had its status changed from the first status to the second status, wherein the work process queries the job status table to identify the job having the second status which is associated with that work process and to obtain job information (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23 – Each work process is notified of which jobs are in the status corresponding to the respective work process. The status information is retrieved by querying a job status table); and

modifying, with the work process, the status of the job in the job status table after completing the processing of the job, wherein each work process is associated with one input status and one or more output statuses, wherein the modified status of the job is associated with another work process, and wherein the mapping may be modified to perform at least one of adding, removing, and modifying statuses associated with work processes to modify an order of the job processing (Fig. 6; col. 2, lines 7-11, 32-35; col. 3, lines 55-65; col. 4, lines 12-17, 38-55; col. 6, line 64 through col. 7, line 4; col. 10, lines 50-59; col. 12, lines 14-24 – Priority and class attributes may be set to define the order in which the work processes associated with various jobs are to be performed; col. 4, lines 60-63 discuss how a user can alter the order of jobs);

wherein job status is maintained in a database table including information on the job, further comprising maintaining, with the work process, a connection with the database that enables communication with the database table, wherein modifying the

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status of the job with the work process after completing processing comprises updating the status of the job with the work process to an output status associated with another work process, and wherein updating the status with the output status generates the signal indicating a change in status (Figs. 2, 6; col. 6, lines 21-67; col. 11, lines 3-23);

wherein the work process further comprises performing:

determining, with the computer system, whether the work process completed processing the job successfully (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33); and

updating, with the computer system, the status of the job to an error status if the work process did not complete processing the job successfully, wherein the status of the job is updated with one output status associated with the work process if the job work process completed processing the job successfully (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33); and

wherein an error work process is associated with the error status, wherein updating the job to the error status causes the notification of the error work process (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33), and wherein the error work process further comprises performing:

performing error recovery operations on the job (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33);

determining whether the error recovery operations corrected the job (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33); and

setting the job status of the corrected job to a first possible status in the workflow (col. 4, lines 1-3, 51-53; col. 6, lines 53-56; col. 7, lines 5-33 – For example, the status of a reprint job is updated so that it can proceed to subsequent work processes).

[Claims 13-18 and 20-24] Claims 13-18 and 20-24 recite limitations already addressed by the rejection of claims 1-6 and 8-12 above; therefore, the same rejection applies.

[Claim 19] Claim 19 recites limitations already addressed by the rejection of claim 7 above; therefore, the same rejection applies.

[Claims 25-30 and 32-36] Claims 25-30 and 32-36 recite limitations already addressed by the rejection of claims 1-6 and 8-12 above; therefore, the same rejection applies.

[Claim 31] Claim 31 recites limitations already addressed by the rejection of claim 7 above; therefore, the same rejection applies.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 10 am - 6 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susanna M. Diaz
Primary Examiner
Art Unit 3623

June 26, 2005